

SPECIFICATION

Please amend the title to read as follows:

~~METHOD AND SYSTEM FOR DYNAMIC RISK ASSESSMENT, RISK
MONITORING, AND CASELOAD MANAGEMENT~~ ARTIFICIAL INTELLIGENCE (AI)
SYSTEMS AND METHODS FOR RISK ASSESSMENT

Please amend paragraph [0021] at page 9 to read as follows:

[0021] A Web site is, in general terms, a server application that displays information stored on a network server computer. The web site accepts connections from client programs, such as Internet browser applications. Browser applications, such as ~~Microsoft Internet Explorer~~ MICROSOFT INTERNET EXPLORER™ web browser or ~~Netscape Navigator~~ NETSCAPE NAVIGATOR™ web browser, allow Internet users to access information displayed on the Web site. Most browser applications display information on computer screens and permit a user to navigate through the Web using a mouse. Like other network applications, Web browsing uses the client-server paradigm. When given the Uniform Resource Locator (URL) of a document, the browser application becomes a client and it contacts a server application specified in the URL to request the document. After receiving the document from the server application, the browser application displays the document. Typically, when the browser application interacts with the server application, the two applications follow the HyperText Transport Protocol (HTTP). HTTP allows the browser application to request a specific article, which the server application then returns. To ensure that browser applications and server applications inter-operate unambiguously, HTTP defines the exact format for requests sent from the browser

application to the server application as well as the format of replies that the server application returns.

Please amend paragraph [0033] at page 12 to read as follows:

[0033] It is to be understood that both the foregoing general description and the following detailed description are exemplary ~~and exemplary~~ only and are not restrictive of the invention, as claimed.

Please amend paragraph [0054] at page 18 to read as follows:

[0054] Fuzzy logic developed out of a need to represent, mathematically, uncertainty and vagueness, and to provide formalized tools for dealing with the imprecision intrinsic to many real world problems. Fuzzy logic makes use of fuzzy sets and fuzzy relational equations. Unlike classical logic, wherein a subset A of elements in a set X can be mapped into either True and False represented by the set {0,1} (where "0" represents non-membership, false, and "1" represents membership, true), a fuzzy set can include a continuum of values representing a degree to which an element belongs, or is a member of the set X. In fuzzy theory, linguistic quantifiers such as "never," "sometimes" and "always" are used to relate elements of different fuzzy sets. Once fuzzy sets are established over so-called "~~discourses of universe~~ universes of discourse," fuzzy rules are defined to relate fuzzy sets. For example, universe of discourses X and Y can respectively represent speed and stopping distance. Ranges of the universe of discourse can include several subsets, such as {X: slow, medium, fast} and {Y: long, short}.

Fuzzy rules relating fuzzy subsets of X and Y could be:

1) IF speed is high,

THEN stopping distance is long; or

2) IF speed is low,

THEN stopping distance is short.

Please amend paragraph [0061] at page 22 to read as follows:

[0061] Figure 8 figuratively shows how rule outputs y^s are summed to produce a composite risk score Y . (While Figure 8 shows each rule 801 as having every fuzzy variable "A," it is to be understood that this is for conceptual purposes only. Each rule may have different combinations of fuzzy variables and also may have other logical operators, such as OR, AND, NOT, etc.)

Input data $x_A, x_B, x_C, \dots, x_{FFF}$ from various measured input variables, such as those in Table I for child abuse risk assessment, fires their corresponding "A" part of each rule in the rule-base 602 to a degree ~~the~~ that depends on the membership value of the input to produce outputs y_1', y_2', \dots, y_m' . These outputs are then summed to arrive at inference output y . Because the combination of a number of linguistic variables is itself a linguistic variable, application of the compositional rule of inference needs to be followed by a technique to defuzzify its result to generate a single output value Y that can, for example, be indicative of a composite risk score. Defuzzification techniques such as center-of-area/gravity, center-of-sums, center of largest area, first-of-maxima, middle-of-maxima, max-criterion, height defuzzification, or others known to those skilled in the art may be used to produce a useful risk output score in the present invention.

Please amend paragraph [0068] at page 25 to read as follows:

[0068] Several variables must first be evaluated for system input in the risk assessment system of the present invention. The Table shows an exemplary set of adaptive fuzzy system input

variables appropriate for assessing a child's risk of physical abuse. While some variables are fixed at any particular instant in time such as age, many variables such as "mental health" are difficult to define precisely, and thus may constitute fuzzy sets over ~~universe of discourses~~ universes of discourse. The system converts responses to queries posed by the system to the client into fuzzy or neural inputs that can be used in the risk assessment application of the present invention.

Please number the table entitled "Input Variables for a Child Abuse Risk Assessment (exemplary subset of system algorithm) at page 27 as – "Table I"

Please amend paragraph [0083] at page 35 to read as follows:

[0083] Client computers 310-318 may run browser applications such as ~~Microsoft Internet Explorer~~ MICROSOFT INTERNET EXPLORER™ web browser or ~~Netscape Navigator~~ NETSCAPE NAVIGATOR™ web browser to access server 302. The browser may instead be a custom browser or any type of browser that can be used to display a page downloaded from the Internet. The browser is capable of processing commands that may be contained in a downloaded HTML or XML document. Arrows 305 conceptually illustrate the connections between computers 310-318 and server 302. It is to be understood that server-client connection may take any of the forms discussed above, such as through optical, wire, and/or wireless media, for example.

Please amend paragraph [0089] at page 37 to read as follows:

[0089] After the ANN or AFLRA application is sufficiently trained, system 300 is activated to allow network access. Thereafter system 300 never shuts down. Decision blocks 404, 405 and path 406 together represent the process where server 302 is in standby mode 430 where it continually checks for clients attempting access to the system. A worker who wishes to enter a new primary client in the system may request access to the server. At this time, the system software 324 creates a new primary client log space within database 304. This is represented by process 413 in which new primary client data is gathered and is entered into system database 304 in process 414. Data may be entered using a peripheral device (not shown) hardwired to the system, by uploading a Web page to server 302 from the worker through TCP/IP software, by telephonic land lines, through airwaves, and/or any other means known to those skilled in the art. New primary client data may also include data from secondary clients. Preferably, new primary client data may be entered in an ongoing basis after activation of system 300.